

Re: Olympus PMG

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- *From:* dljones@xxxxxxxxxxxx
 - *Date:* Fri, 22 Jun 2007 09:27:58 -0700
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On Jun 22, 7:50 am, "Kevin Cunningham" <sms...@xxxxxxxxxxxx> wrote:

<dljo...@xxxxxxxxxxxx> wrote in message

news:1182435550.466441.146040@xx

Hello all,

I'm new to this forum, so if anything I ask has been answered before, I would be happy to learn how to find the answer...

I have just gotten a, I think, very beautiful Olympus PMG metallograph. It's from the 1960's I believe. I am in the very beginning stages of restoring it. So really right now I'm just doing an inventory of what's good, bad, broken, etc.

I need the screw that holds the fine focus lever in place, it is sheared off. If anyone knows a source for these kinds of parts, do let me know. My guess is I'll become friends with a machinist...

I would like to know if anyone may have technical documentation about this instrument so that I can know how to take various things apart and if there are hidden small parts that I'll likely lose if I'm not aware they exist...

All existing mechanically moving parts need to be cleaned of their old

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grease and new grease applied. Does anyone have suggestions as to what kind of grease should be used where?

I have a protocol from Olympus on how to clean optical surfaces, but when it gets to cleaning internal prisms and mirrors, it says to contact a local technician.... Any advice on how best to clean these internal optical surfaces, or what not to do, etc.

Here's a bit of a brain teaser for you. The instrument came with a eye piece mounted micrometer but I can't figure out the scale that is being used. The piece has the following markings on it:

On the body that houses the micrometer mechanism – OSM 202575
On the eyepiece itself – Olympus Elgeet R10X

I am assuming the 10X is the magnification of the eyepiece, I don't know what the R means.

I put a stage micrometer on and measured the following:

0.05 mm = 57 units on eye piece micrometer
0.10 mm = 114 units
0.15 mm = 171 units
0.20 mm = 228 units.

Does anyone recognize what unit system this eyepiece micrometer works in? Or what this eyepiece may have originally been used for?

Thank you very much for your time.

dj

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There are several grease maker that I use. I use only synthetic greases, they last a lot longer. One good quality maker is Dow-Corning, their 111 and 43 (?) work well. I still use the 111. Mostly I use Nye lubricants from TAI

(<http://easyweb.abtnet.com/inetisscripts/abtinetis.exe/ecproductlist@xxxx>).

Their assortment of synthetic greases will run less than \$90.00 and last for ever. Get a small artists paint brush to apply it at an artists store.

Cleaning internal prisms, etc. is the same as cleaning the surfaces of lenses. BE CAREFULL! Don't act like an ass. Use either Kimwipes or Kleenex tissues, just the tissues. The put a small amount of Windex and Alcohol on and gently wipe the surface. Then throw the wipe away and gently wipe with a dry wipe. Never clean dry. Always clean wet.

Don't get overly worried about what alcohol you use, I buy mine at the local hardware store. The point is to have a high vapor pressure and a safe product. The high vapor pressure is what cleans the lens and it evaporates rapidly meaning it won't penetrate into the lens. Its alcohol so its safe, I plan to drink so alcohol containing beer this evening so I know its safe.

Its best to use a set of Menda bottles or an imitation of a Menda. They dispense a very little every time you hit the top. That works best. Oh, these are metric, don't use inch tools.

Thanks and let us know what happens.

Kevin Cunningham
SMS

Kevin,

Thank you. This question has had me at a complete standstill. I was going to tear apart the stage last night and then realized I still didn't have a clue as to what grease to use putting it back together...

One comment, I was reading somewhere (darn, wish I'd marked the source) that alcohol shouldn't be used on older microscopes. Oh, yes, there it is, found it on the yahoo group Gordon Cougar runs, The Clean Microscope published by Zeiss. Now maybe this only applies to Zeiss? I don't know. On page 11 of that document under point 5 it says: " Do not use ethanol or acetone for the cleaning of older microscopes." It then lists a bunch of Zeiss' older scopes. Do you have any thoughts on this?

Very nice suggestion on the Menda bottles.

Also, excellent suggestion on how to test for safety on the alcohol... I think I'll have to try tonight also, do you think wine as a medium

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will work as well as beer? :)

Thanks again,

dj

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